

Abstract

A base station (BS) and a plurality of remote stations in a code-division-multiple-access (CDMA) system employ spread-spectrum communication. The base station has a BS-spread-spectrum transmitter and a BS-spread-spectrum receiver. A remote station has an RS-spread-spectrum transmitter and an RS-spread-spectrum receiver. The BS transmitter transmits a broadcast common-synchronization channel, which includes a frame-timing signal. The broadcast common-synchronization channel uses a common chip-sequence signal. An RS-spread-spectrum receiver receives the broadcast common-synchronization channel, and the RS determines frame timing from the frame-timing signal. In response, the associated RS-spread-spectrum transmitter transmits an access burst signal, including RS-preamble signals, RS-power-control signals, and RS-pilot signals, respectively, transmitted in time, at increasing power levels. The BS-spread-spectrum transmitter, responsive to the BS-spread-spectrum receiver receiving the access-burst signal, and detecting an RS-preamble signal, transmits an acknowledgment signal. In response to the first RS-spread-spectrum receiver receiving the acknowledgment signal, the first RS-spread-spectrum transmitter transmits a spread-spectrum signal having data.